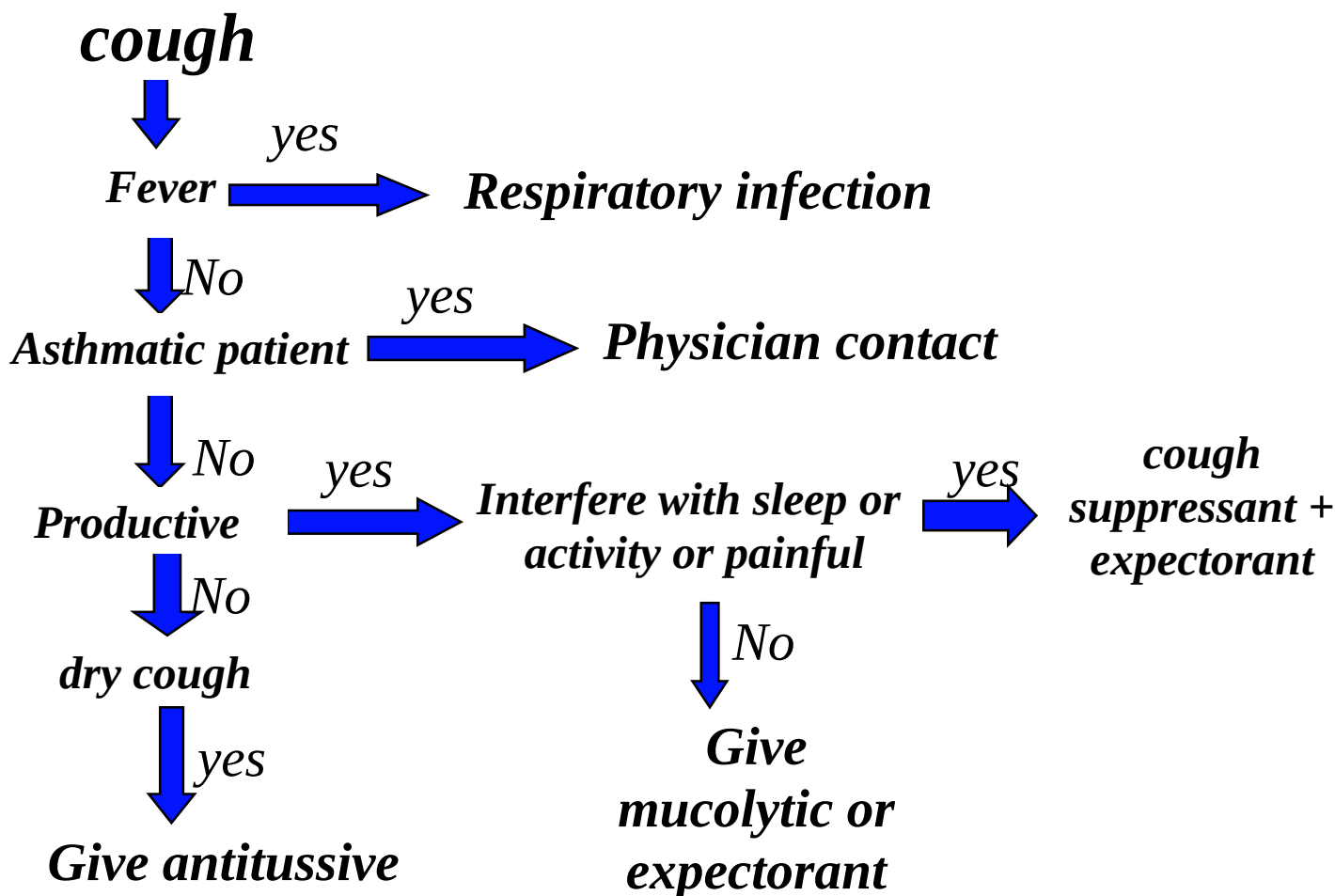




Anti-Tussives = Cough Suppressants

Drugs used to suppress dry cough Contraindicated in productive cough

Peripheral

↓ cough receptors

- 1 – **Stop Smoking**
- 2 – **Pharyngeal Demulcent** e.g **Liquorice** → Forms a protective coat & sooth irritated pharyngeal mucosa
- 3 – **Water Steam Inhalation** + **Tincture Bezoin or menthol** → ↑ bronchial glands to secrete thin & Protective mucus
- 4 – **Bezonatate**
 - a – Chemically related to procaine , a local anesthetic
 - b – **Dual** antitussive → Central + Peripheral

Central

↓ Cough center in medulla

- 1 – **Dextromethorphan** → Contraindicated in asthma as it causes release of histamine
- 2 – **Pholcodin** → Does not cause constipation , respiratory depression or habituation
- 3 – **Clobutinol** → It has the advantage of rapid onset of action
- 4 – **Butamirate** → It has the advantage of causing bronchodilation so it can be used in asthmatics
- 5 – **Oxeladine** 6 – **Benproperine** 7 – **Diphenhydramine**
- 8 – **Pipazethate** 9 – **Benzonatate** 10 – **Noscapine**

Expectorants

Expectorants are drugs that increase the secretions of respiratory tract, thus, facilitating effective drainage. The mechanism of action is probably through reflex irritation of gastric mucosa. There is no scientific evidence that these drugs have any pharmacological actions. With best results , the therapeutic value to the patients is minimal , if at all. So, when prescribing these drugs, one should not expect an appreciable response. Most of the available mixtures contain either **ammonium chloride** or **guaiphenesin** as an expectorant. An antihistaminic drug is usually present to act as a sedative. However, antihistaminic will cause dryness of secretions and oppose the presumed expectorant effect. As the pharmacological action is doubtful, choice between different mixtures is not critical.



Classification of expectorants

Sedative expectorant	Stimulant expectorant
↑ Secretion of Thin , soothing & protective bronchial mucus → Sedate Acutely inflamed mucosa	Stimulate the healing of chronically inflamed mucosa
1 – Na ⁺ or k ⁺ Acetate , Bicarbonate, Benzoate or citrate 2 – Ammonium chloride or Carbonate & Tr.Ipeca 3 – Na ⁺ or k ⁺ Iodide	Examples : Creosote, Guaiacol & Terpene hydrate
Used in Bronchitis and Bronchial asthma	1 – Used in Chronic suppurative lung diseases e.g. Lung abscess and Bronchiectasis. 2 – <u>Not</u> used in bronchitis or bronchial asthma

Mucolytic Agents

They Liquefy the viscid secretions ... They help the action of Expectorants

1 – Bromhexine → Useful in Bronchitis and Bronchial asthma (Bisolvon)® Full therapeutic response usually occurs after 2-3 days of onset of therapy
2 – Carboxymethyl cysteine = Carbocysteine → Useful in Bronchitis and Bronchial asthma. (Mucosol)® Prevent hyperplasia of mucous glands.
3 – Acetylcysteine → Used as inhalation in bronchitis (Mucosolvan)® I.V or orally to treat paracetamol-induced Hepatotoxicity
4 – Ambroxol (Mucosin) ® → Improve mucous flow and transport (mucokinetic effect)
5 – Erdosteine (Mucotec) ® 6 – (Enzymes) : → Chemotrypsin & Trypsin → orally
يتم وقف العلاج بمزيجيات البلغم اذا لم يحدث تحسن بعد شهر من استخدامها ... تستخدم بحذر مع مرضى قرحة المعدة

Bronchodilators

Types	β_2 Agonists	Methylxanthines
Examples	Short acting → Salbutamol, Terbutaline, Bambuterol, Fenoterol Long acting → Salmeterol & Formoterol	Theophylline Aminophylline (Theophylline Ethylene Diamine) Acefylline has the same effect of theophylline and less toxic than it
Side effects	1 – They are not effective during the first 18 months of life because β_2 receptors are not well developed 2 – Tremors usually occur with slight overdosage 3 – headache and palpitation may occur 4 - Hypokalaemia	1 – Narrow safety margine 2 – Headache , Insomnia & Convulsions (seizures in children) 3 – Tachycardia , palpitation , arrhythmia & hypotension (rapid IV) 4 – Orally → anorexia & nausea 5 – Rectally → ↑ Proctitis in children

مستحضرات الكحة الجافة ← (بعض الأمثلة)

Drug	Active constituent	مستحضرات أخرى	إبريق
Tussivan شرب	Dextromethorphan	Alveolin	
Tusscapine شرب	Noscapine	Tussapine	
Sinecod شرب وقط	Butamirate	Notussil	
Paxeladine شرب وكبسولات	Oxeladine citrate	Coflin	
Selgon قط ولبوس وقراص	Pipazethate	Anti-Tussives لعلاج الكحة الجافة	

يمكن إستخدام أي

مذيب للبلغم + موسع للشعب

Drug	Active constituent
All-Vent & Bro-zedex	Terbutaline + Bromhexine + Guaiphenisin + Menthol
Farcosolvin & Trisolvin	Ambroxol + Theophylline + Guaiphenisin
Mucovent	Bromhexine + Sulbutamol
Mucophylline	Bromhexine + Acefylline
Octovent & Bronchovent & Ventolin Exp	Guaiphenisin + Salbutamol

أدوية تحتوى على مكونات عديدة ← يوجد مضاد للحساسية بمعظم تلك المستحضرات

Drug	Active constituent
Bronchophane	Guaiphenisin + Ephedrine + Diphenhydramine + Dextromethorphan
Codilar	Phenylephrine + Dextromethorphan + chlorpheniramine
Coldal	Sodium benzoate + K citrate + Ammonium chloride + Ephedrine + Diphenhydramine + Tincture ipeca
Cyrinol	Pholcodin + Terfenadine + Carbinoxamine
Isilin	Diphenhydramine + Sodium benzoate + Ammonium chloride + Menthole
Toplexil	Oxymemazine + Glyceryl Guaiacolat + Sodium benzoate + Paracetamol
Ultrasolv	Guaiphenisin + Carbocysteine + Oxymemazine

أدوية الكحة التى تحتوى على أعشاب طبيعية

تتطلب الكحة أثناء الحمل والرضاعة والأطفال وكبار السن وعم كفاءة الكبد والكل

معظمها تحتوى على إحدى أو معظم تلك المكونات Guava , Tilia , Thyme , Fennel , Licorice , Anise oil , Peppermint
Ginger , Honey , Ivy Leaves & Camphor

Examples

(Balsam → adult , infant) , Broncho , Conix , Fast , Guava , Cough aid , Broncare ,
Mentix , Ivypront , Penta mix , Relief , Sinuc , Thymy & Tussinor

القطر المتوفرة لعلاج الكحة

للعلاج الكحة الجافة (Sinecod)® → Butamirate & (selgon)® → Pipazethate
مذيبات البلغم (Ambroxol , Brochopro, Mucopect, Mucosin)® → Ambroxol & (Solvin, Bisolvon)® → Bromhexine
أعشاب طبيعية Conix, Guava reem , Guava trix, mini Guava & Proscough

اللبوس المتوفر لعلاج الكحة

(للرضع والأطفال → Rectoplexil) & Eucaphol , Coughseed Paracetamol , Selgon

كذلك يتوفر لبوس للأدوية الموسعة للشعب الهوائية مثل Etaphylline & Minophylline

إذا كانت الكحة مصحوبة بعدوى بكتيرية يتم استخدام المضادات الحيوية مثل Azithromycin , Cephalosporins